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Understanding the unique contribution of aversion to risk taking in predicting drivers' self-reported speeding

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Abstract

Recent research has highlighted the importance of a drivers' attitude towards risk taking as one of the factors influencing safe driving behaviours. However, the strength of the relationship between drivers' attitude towards risk and their speeding may depend on other factors such as age, gender, and the frequency of driving, or even combinations of these factors. A survey completed by 400 students at the University of Southern Queensland found that aversion to risk taking was the single strongest predictor of self-reported speeding (sr^2 = .07) even when competing against well known predictors such as driving efficacy, worry and concern, likelihood of accidents, personality traits (e.g., thrill seeking, dislike of driving, hazard-monitoring, fatigue proneness, and aggression) and coping variables (e.g., task-focused, reappraisal, emotion-focused, avoidance, and confrontive coping). Further analyses focused on the moderation effects of age, gender, and driving frequency. The first analysis found that for younger drivers (≤ 20 years, N = 108), aversion to risk taking was still the strongest unique predictor (sr^2 = .07). The second analysis confirmed an interaction between gender and aversion to risk taking with males (N = 79) reporting a much weaker relationship between aversion to risk taking and speeding (sr^2 = .01). The third analysis showed that drivers who are less frequent drivers (N = 105) also have a weaker relationship between aversion to risk taking and speeding (sr^2 = .04). The inclusion of personality variables and coping variables in this study allowed the unique contribution of individuals' aversion to risk-taking to be determined, while the examination of the potential moderating effects of age, gender, and frequency of driving showed that this unique contribution varies between 1% and 7%. Researchers must consider the possible moderating effects of these factors when specifying models that link individual attitudes, perceptions, and attributes to driving behaviours.

There is considerable interest in the role of risk perceptions in determining driving behaviour. Speeding is an example of a risky driving behaviour that has been studied by many researchers (Aarts & van Schagen, 2006; Jonah, 1997; Lam, 2003). Risk perceptions in relation to driving are "the subjective experience of risk in potential traffic hazards" (Deery, 1999, p. 226) and have been identified as one of the strongest predictors of speeding (Machin & Sankey, 2008). Models of the predictors of driving behaviour have included dispositional characteristics and coping strategies reflecting the different factors that combine to influence the appraisal of risk when driving. In particular, the transactional model of driver stress and coping developed by Matthews (2001) indicates that risk perceptions are probably a function of the driver's appraisal of their environmental demands and their choice of coping strategies, both of which are influenced by the driver's personality characteristics. Therefore, the unique role of risk perceptions in predicting risky driving behaviour depends on the type of model that is proposed which could contribute to differing conclusions about the importance of risk perceptions. This study focuses on the unique contribution of one measure of risk perceptions (aversion to risk taking) in the prediction of speeding whilst controlling for a range of other predictors of speeding. It also examines whether this outcome will change depending on the age, gender, and the frequency of driving.

Assessing Drivers' Risk Perceptions

There have been a number of approaches to assessing drivers' risk perceptions mainly reflecting a cognitively-based assessment process. However, when measuring perceived risk, Rundmo and Iversen (2004) considered it was important to distinguish between cognitively-based and affective-based subjective assessments. Rundmo and Iverson discovered that drivers' probability judgements pertaining to negative

outcomes and level of concern about traffic risks were not related to risky driving behaviour (including speeding). However, being worried about negative outcomes, feeling unsafe, and other emotional reactions were predictors of risky driving behaviour leading the authors to conclude that the affective component of risk perception is more important than the cognitive component when predicting risky driving behaviour.

One approach to assessing risk perceptions involves assessing how dangerous various activities are perceived to be. Based on a scale developed by Dalziel and Job (1997), Machin and Sankey (2008) compared the predictive strength of aversion to risk taking with three other risk perception variables and five measures of personality. The combined worry and concern items used by Rundmo and Iversen (2004) were used to measure the affective aspect of risk perception but did not contribute to the prediction of speeding. Likelihood of an accident, driving efficacy, and aversion to risk taking were significant unique predictors of speeding accounting for 6%, 3%, and 15% of the variance respectively. Two personality variables were also significant predictors of speeding, with excitement-seeking and altruism accounting for an additional 2% and 3% of the variance respectively. Further analysis using structural equation modelling demonstrated that the impact of two personality variables was equal to the participants' aversion to risk taking in influencing speeding behaviour given that the effects of the personality variables on speeding was partially mediated by aversion to risk taking.

One of the difficulties in drawing conclusions from the previous study relates to the variables that were *not* included in the model that was being tested in that study. While there is clearly a strong relationship between aversion to risk taking and speeding, we recognise that drivers' risk perceptions may also be related to their

choice of coping strategies. A second issue concerns the possible moderating effects of demographic characteristics such as age, gender, and frequency of driving. These two issues are discussed and then the proposed analyses for the current study outlined.

Impact of Drivers' Coping Strategies

Matthew's (2001) transactional model proposed that drivers' appraisal of their environment and their assessment of their capacity to cope influences their perceptions of risk and subsequent coping strategies. Some drivers will adopt more maladaptive coping mechanisms, which may contribute to greater speeding.

Matthews et al. (1996) identified five coping styles applicable to driving: confrontive coping, task-focused coping, emotion-focused coping, reappraisal, and avoidance. Confrontive coping strategies involve antagonising other drivers or risk-taking and are therefore potentially dangerous. Task-focused strategies are safety-enhancing because they involve coping efforts related to driving safely. Emotion-focused coping represents strategies of self-criticism and worry, which may cause cognitive interference and distract the driver. Avoidance may also be associated with reduced attention to task, whilst reappraisal may be more adaptive because it is associated with positive cognitions of the driving experience.

Matthews et al.'s (1996) research suggested that confrontive and emotion-focused coping were maladaptive coping styles associated with more negative outcomes. For example, Matthews et al. found that confrontive coping is linked to violations, errors, and loss of safety. They also found that emotion-focused strategies such as self-criticism have the potential to distract the driver. Matthews et al. (1997) also confirmed that confrontive coping is correlated with greater speeding. Therefore, the conceptual model must include these coping strategies in order to understand the contribution of risk perceptions to risky driving behaviour.

Another group of influences on driving behaviour are drivers' personality characteristics which can contribute in two ways: as direct contributors to risky driving behaviour, or as indirect effects. Machin and Sankey (2008) included the same personality variables used by Ulleberg and Rundmo (2003), assessing anxiety, anger, excitement-seeking, altruism, and normlessness. As described above, the impact of excitement-seeking and altruism on speeding was partially mediated by aversion to risk taking. Matthews et al. (1997) developed the Driver Stress Inventory (DSI) specifically to measure differences in drivers' personality. The DSI includes scales assessing aggression, dislike of driving, hazard monitoring, thrill seeking, and fatigue proneness. Matthews et al. found that thrill seeking and aggression are associated with more risky driving, in particular, speeding. These results suggest the conceptual model should also incorporate measures of personality in additional to coping strategies and risk perceptions when predicting risky driving behaviour.

Other Factors Influencing Speeding

The conceptual model should also incorporate the demographic characteristics that are related to risky driving behaviour. There is considerable support for the link between being male and being younger with an increased level of risky driving behaviour. Yagil (1998) found that younger male drivers expressed lower motivation to obey traffic or road laws, compared to older and female drivers. Mast, Sieverding, Esslen, Graber, and Jancke (2008) linked 'masculinity' with increased speeding. In their study of 83 males, participants were randomly primed by actively listening to either feminine, masculine, or neutral words from a radio whilst driving a car simulator. Results from the study demonstrate that once the selected participants began listening to the masculine words, their speed dramatically increased from start to end of the driver simulator.

The frequency of driving also might influence drivers' risk perceptions and driving behaviour. In particular, it is likely that more frequent drivers will evaluate the demands of driving differently, may assess their capacity to cope differently, and therefore develop different risk perceptions.

In order to determine whether these demographic characteristics impact on the conceptual model of the predictors of risky driving behaviour, a series of moderator analyses will be conducted in which the overall fit of the conceptual model is evaluated separately for males and females, for younger and older drivers, and for more and less frequent drivers. This process can be conducted using a multiple group analysis within a structural equation model. However, in order to specify the structural equation model, we would need to refine the set of predictor variables as described in Machin and Sankey (2008). Therefore, for this paper, the whole set of predictors will be used in a standard multiple regression analysis with all predictors entered simultaneously. Subsequent standard multiple regression analyses will be conducted for each of the subgroups so that the unique contribution of aversion to risk taking in the prediction of speeding can be assessed. More elaborate analysis based on structural equation modelling will be reported in another paper.

Method

Participants

The 402 participants, who completed the online (web-based) Driving Attitudes Survey, consisted of a sample of first to third year psychology students from the University of Southern Queensland (USQ). The data were collected between 2007 and 2008.

There were a high proportion of female respondents who completed the survey (80.3%). Approximately 80.3% of the total participants fell between the ages of 17 to

40. The remaining 19.7% of participants fell between the ages of 41 and 75. In total, approximately 20.8% of the participants were young drivers, aged between 17 and 19. Of the participants, 71.8% held open drivers licenses, and 20.8% held provisional drivers licenses. Of the remaining participants, 7% held learner licenses, whilst less than 1% held disqualified licences. A high majority of the participants had held their respective licenses for more than three years (62.8%). The remaining participants had held their licenses for less than three years (37.3%), with an even spread across each six month period in between. Most respondents drove often, with 73.8% driving every day, and 15.8% driving more than three times a week. 4.8% of respondents drove once a week, whilst 5.8% drove less than once a week.

Measures

An online survey questionnaire, titled the Driving Attitudes Survey, consisting of 126 items and five sections, was used for this study. The questionnaire was used to examine Australian driver's self-reported risk perceptions, personality characteristics, and coping strategies as predictors of speeding.

Demographics

The first section of the survey consisted of eight items intended to collect basic demographic information. The first question was designed to determine whether the participant was a member of the Australian Drivers Training Association (ADTA) (e.g., Yes/no). If the participant responded 'yes' to the question, they were required to answer an additional question intended to gather years of membership. This was performed by the participant typing the appropriate number into the box provided. If the participant responded 'no', they were required to answer an additional question indicating whether they were a USQ student (e.g., Yes/no). Remaining items gathered basic demographic information including age, gender, type of licence held (e.g.,

Learner, open, provisional or disqualified), how long the driver had held their license (e.g., 0-6 months, 6-12 months, 1-2 years, 2-3 years, > 3 years), and how often they drove (e.g., Every day, once a week, more than three times a week, and less than one week).

Driver Coping Scales

The Driver Coping Questionnaire (DCQ; Matthews, et al., 1997), consisting of 35 items and five scales, was used to examine participant's cognitive responses to driving when it is difficult, stressful, or upsetting. Each scale consisted of seven items designed to measure a particular coping strategy. The coping strategies measured included Confrontive Coping (e.g., Relieving feelings by taking risks or driving fast), Task-Focused Coping (e.g., Avoiding reckless or impulsive actions), Emotion-Focused Coping (e.g., Wishing that one was a more confident and forceful driver), Reappraisal (e.g., Trying to gain something worthwhile from the drive), and Avoidance Coping (e.g., Staying detached or distanced from the situation). All items were all positively scored, with a scaling factor used to give an overall score from 0-100. From a UK sample, Cronbach's Alpha coefficients for the scales were found to fall within .72 to .84 (Matthews et al., 1997). As the levels fell above the recommended acceptability ($\alpha \geq .70$), the internal consistencies of the scales were deemed acceptable (Steiner, 2003).

The Driver Stress Inventory

The Driver Stress Inventory (DSI; Matthews, et al., 1997), consisting of 47 items and five scales, was used to assess participant's typical feelings experienced whilst driving. The scales measured the following characteristics: Aggression, Hazard Monitoring, Thrill Seeking, Dislike of Driving, and Fatigue Proneness.

Using an 11-point visual-analogue scale (VAS), participants were asked to respond by stating their agreement with each question, which ranged from 0 (*not at all*) to 10 (*very much*). Some of these items were reverse-scored to help prevent random responding, from 0 (*very much*) to 10 (*not at all*). Total scores were calculated using a scaling factor, which could theoretically range from 0-100. Cronbach's Alpha coefficients for the scales were between .73 to .87 in a UK sample, and .73 to .85 in a US sample (Matthews et al., 1997). These scales were therefore deemed acceptable (Steiner, 2003).

Risk Perceptions

The measures of risk perceptions included in this survey included an affective-based scale, and three cognitively-based scales (Machin & Sankey, 2008). The affective-based Worry and Concern scale included six items designed to measure the participant's perception of traffic injury and risks (e.g., To what extent are you feeling unsafe that you yourself could be injured in a traffic accident?). Scores on each item were summed to obtain a total score ranging from 6 to 30. The Cronbach's Alpha coefficient was found to be .88 by Machin and Sankey (2008) which was acceptable.

The three cognition-based scales consisting of Likelihood of Accident, Efficacy, and Aversion to Risk Taking, were also taken from Machin and Sankey (2008). The Likelihood of Accident scale consisted of two items, in which the driver was required to rate their chance, as well as other driver's chances of an accident in the next 12 months. The scale items were both positively keyed, and scored on a 10-point rating scale. Increments of 10% were used for the scale and ranged from 1 (*0 - 10%, no chance*) to 10 (*90 - 100%, extremely likely*). Combined overall Likelihood of Accident score range was 2 to 20. Machin and Sankey (2008) only reported the results

for the single item relating to likelihood of the driver themselves having an accident and therefore there was no Cronbach's alpha coefficient for that one item.

The Efficacy scale consisted of five items designed to measure the participant's confidence whilst driving in certain conditions. Participants were required to respond to each question by stating their agreement on a five-point Likert type rating scale from 1 (*not at all*) to 5 (*extremely*), (e.g., How confident are you on unfamiliar roads). All items were positively keyed, with scores for the five items summed together to provide a total score ranging from 5 to 25. The Cronbach Alpha coefficient for Efficacy reported by Machin and Sankey (2008) was .88 which was acceptable.

The Aversion to Risk Taking scale consisted of eight items designed to assess how dangerous participants thought specific actions are whilst driving. Participants were required to answer by stating their agreement to each question on a five-point Likert type rating scale from 1 (*not at all dangerous*) to 5 (*extremely dangerous*), (e.g., How dangerous is running a red light). All items were positively keyed, with scores for the eight items summed together to provide a total score ranging from 8 to 40. The Cronbach's Alpha coefficient for the Aversion to Risk Taking scale reported by Machin and Sankey (2008) was .79 which was acceptable.

Risky Driving Behaviour

The same scales that Ulleberg and Rundmo (2003) used to measure self-reported risky driving behaviours were included in this study. These measures assessed Self-Assertiveness, Rule Violations, and Speeding. However, for the purposes of this study, only Speeding was considered. The Speeding scale consisted of six items designed to measure the rate participants engaged in speeding related behaviour (e.g., I overtake cars in front when it is driving at the speed limit). All items

were positively keyed, with participants required to answer by stating their agreement to each item on a five-point Likert type rating scale from 1 (*never*) to 5 (*very often*). Scores for the six items were summed together to provide a total possible score for Speeding, ranging from 6 to 30. The Cronbach's Alpha coefficient for Speeding reported by Machin and Sankey (2008) was .82 which acceptable.

Procedure

A link to the Driving Attitudes Survey was posted onto the USQ Psychology Online Survey System (OLS). This permitted the first to third year psychology students to start participation in the study. The students, who were enrolled in specific psychology courses, were initially informed of the study by information presented in their introductory materials. The study was given the Ethics Approval from the USQ Psychology Department Ethics Committee (EP200733) prior to commencement. The standard procedure for gaining informed consent was performed, with a title page at the beginning of the web-survey notifying participants of their rights. Participants were informed their results would be kept confidential, and were notified that they were free to withdraw from the study at any time.

Results

The initial sample size consisted of 402 cases. An alpha level of .05 was used for all statistical analyses conducted. Before any data screening or analyses were performed, reliabilities were calculated by computing Cronbach's Alpha, to measure the internal consistencies for all scale items. For the present study, all of the scales obtained reasonable internal consistency reliabilities ($\alpha > .70$) apart from Likelihood of Accident ($\alpha > .65$). As in Machin and Sankey (2008), only the results for the single item relating to likelihood of the driver themselves having an accident will be reported. Table 1 includes the mean, standard deviation, and Coefficient Alpha values

for all 15 scales used in the analysis. Initial data screening revealed no data were missing. However, two cases were deleted as those responses contained an identical answer for each question which is indicative of a response set. The final sample size was 400. The intercorrelations among the variables are presented in Table 2.

Table 1

Mean, Standard Deviation, and Cronbach's Alpha for all Variables (N = 400)

Variable	No. Items	*M*	*SD*	α
Speeding	6	11.38	4.44	.84
Worry and Concern	6	15.57	5.47	.92
Likelihood of Accident	1	2.44	1.67	-
Efficacy	5	17.29	4.05	.88
Aversion to Risk Taking	8	30.54	4.68	.78
Aggression	12	48.78	15.24	.85
Dislike of Driving	12	42.10	16.11	.85
Hazard Monitoring	8	67.44	13.54	.78
Fatigue Proneness	7	43.86	18.17	.80
Thrill Seeking	8	26.73	21.79	.89
Confrontive Coping	7	29.33	18.04	.84
Task-Focused Coping	7	76.70	15.47	.83
Emotion-Focused Coping	7	40.19	17.49	.79
Reappraisal Coping	7	52.13	16.30	.79
Avoidance Coping	7	42.62	14.39	.70

Note. No. Items = final number of items in each measure.

Table 2

Intercorrelations among Speeding, Risk Perception, Personality Characteristics, and Coping Strategy Variables (N = 400)

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Speeding	1.00													
2. Worry and Concern	.04	1.00												
3. Likelihood of Accident	.15	.27	1.00											
4. Efficacy	.14	-.34	-.22	1.00										
5. Aversion to Risk Taking	-.50	.15	.01	-.12	1.00									
6. Aggression	.46	.24	.17	-.04	-.27	1.00								
7. Dislike of Driving	-.11	.50	.32	-.72	.09	.14	1.00							
8. Hazard Monitoring	-.30	.11	-.14	.11	.40	-.20	-.08	1.00						
9. Fatigue Proneness	.03	.15	.09	-.32	-.09	.14	.36	-.09	1.00					
10. Thrill Seeking	.51	-.09	.03	.31	-.38	.34	-.25	-.21	-.04	1.00				
11. Confrontive Coping	.52	.04	.09	.17	-.26	.67	-.14	-.21	.01	.38	1.00			
12. Task-Focused Coping	-.43	.05	-.12	-.07	.40	-.37	.08	.48	.01	-.43	-.44	1.00		
13. Emotion-Focused Coping	-.06	.46	.17	-.45	.09	.17	.65	-.02	.28	-.13	-.02	.09	1.00	
14. Reappraisal Coping	-.08	.17	.01	-.02	.19	-.10	.07	.27	-.04	-.06	-.07	.41	.17	1.00
15. Avoidance Coping	.03	.02	-.07	.14	-.04	-.01	-.13	.02	-.03	.05	.05	.14	.00	.29

Note: *r's* $\geq$ .08, $p < .05$ (one-tailed), *r's* $\geq$.11, $p < .01$ (one-tailed).

Standard multiple regression analysis was used to predict Speeding from the risk perception, personality characteristics, and driver coping strategy variables. All variables were entered simultaneously and the unique contribution of each predictor was assessed by examining the significance of the Beta weight and the magnitude of the squared semi-partial correlation coefficient (sr^2). These results are reported in Table 3. The overall model explained 50% of the variance in Speeding ($R^2 = .50$), which was significant with F (14, 385) = 27.25, $p < .001$. There are five variables that uniquely add to the prediction of Speeding with the greatest unique contribution from Aversion to Risk Taking ($sr^2 = .07$) with a Beta weight of -.31 ($t = -7.06$, $p < .001$).

Table 3

Summary of Hierarchical Multiple Regression Analysis for Predicting Speeding (N = 400)

					95% CI	
Variable	*B*	*SE B*	β	sr^2	*Lower*	*Upper*
Worry and Concern	.09	.04	.11*	.01	.02	.16
Likelihood of Accident	.25	.10	.09*	.01	.04	.46
Efficacy	-.01	.06	-.01	.00	-.13	.10
Aversion to Risk Taking	-.29	.04	-.31**	.07	-.37	-.21
Aggression	.02	.02	.08	.00	-.01	.06
Dislike of Driving	-.02	.02	-.07	.00	-.05	.02
Hazard Monitoring	-.02	.01	-.06	.00	-.05	.01
Fatigue Proneness	.00	.01	.01	.00	-.02	.02
Thrill Seeking	.05	.01	.23**	.03	.03	.06
Confrontive Coping	.06	.01	.25**	.03	.04	.09
Task-Focused Coping	-.01	.01	-.04	.00	-.04	.02
Emotion-Focused Coping	-.01	.01	-.05	.00	-.04	.01
Reappraisal Coping	.01	.01	.05	.00	-.01	.04
Avoidance Coping	-.01	.01	-.02	.00	-.03	.02

Note. *$p < .05$, **$p < .01$.

Additional standard regression analyses were conducted for the following subgroups: drivers less than or equal to 20 years old (N = 108), males (N = 79), and drivers who are less frequent drivers (N = 105). These subgroups represented no more than 27% of the overall sample and therefore the results from the overall analysis may not reflect the importance of Aversion to Risk Taking as a predictor of Speeding for these drivers.

The results of the three standard multiple regression analyses were all significant with the overall model explaining 58% of the variance in Speeding for younger drivers (R^2 = .58), with F (14, 93) = 9.17, p < .001. For males, the overall model explained 56% of the variance in Speeding (R^2 = .56), with F (14, 64) = 5.84, p < .001, while for less frequent drivers, the overall model explained 49% of the variance in Speeding (R^2 = .49), with F (14, 90) = 6.15, p < .001.

There is not a great deal of difference between these results and the results for the overall sample with the overall R^2 values being higher for younger drivers and for males. However, the unique contribution of Aversion to Risk Taking differed for these three subgroups. For younger drivers, Aversion to Risk Taking was still the strongest unique predictor (sr^2 = .07) with a Beta weight of -.36 (t = -4.05, p < .001). For the males, Aversion to Risk Taking was not a significant predictor (sr^2 = .01) with a Beta weight of -.16 (t = -1.34, *ns*), while for less frequent drivers, Aversion to Risk Taking was the second strongest unique predictor (sr^2 = .04) with a Beta weight of -.25 (t = -2.57, p < .05) after Thrill Seeking (sr^2 = .06). Therefore, it needs to be recognised that the importance of Aversion to Risk Taking in predicting Speeding does depend on the characteristics of the group with a greater proportion of females and, to a lesser degree, a greater proportion of more frequent drivers serving to strengthen the importance of this measure of risk perceptions.

Discussion

The overall conceptual model of predictors of speeding was able to predict 50% of the variance in speeding which indicates that it is a very well specified model. We were able to demonstrate that there are several unique predictors of speeding, including three risk perception variables (worry and concern, likelihood of oneself having an accident, and aversion to risk taking), one personality variable (thrill seeking), and one coping strategy (confrontive coping). It might be tempting to conclude that the other variables are not important when predicting speeding but this is not true. The results show which variables can contribute uniquely to the prediction of speeding after all of the other predictors have been controlled for. Even though aversion to risk taking contributed an additional 7% of the variance, that means that the other predictors together accounted for 43% of the variance. Therefore, the results suggest that at least three and perhaps as many as five predictors should be included in the conceptual model and that these include personality and coping variables in addition to measures of risk perceptions.

The additional analyses examining the potential moderating effects of age, gender, and frequency of driving showed that this unique contribution of aversion to risk taking varies between 1% and 7% in the three subgroups tested. The unique contribution of the other significant predictors, such as thrill seeking and confrontive coping was not reported in the results. However, these predictors demonstrated similar variation to aversion to risk taking in that they were not consistently significant unique predictors of speeding in the subgroups. Therefore, researchers must consider the possible moderating effects of these factors when specifying models that link individual attitudes, perceptions, and attributes to risky driving behaviours.

The current study extends the results of a previous study by Machin and Sankey (2008) by including a wider range of ages in the sample and also expanding the range of predictor variables to include drivers' coping strategies. While we have not specified a structural equation model examining whether risk perceptions mediate the influence of personality characteristics, we have extended the previous study by including age, gender, and driving frequency as potential moderators of the importance of aversion to risk taking.

One implication of these results is that research into risky driving behaviours has developed very strong conceptual models which explain a great deal of the variance in speeding. These models can be simplified so that we only need to consider a small number of predictor variables, say between three and five, which will capture the majority of the variance in speeding. It is always difficult to consider the simultaneous effects of 15 predictors so this is a definite advantage in researching risky driving behaviours such as speeding. The role of risk perceptions such as aversion to risk taking is quite important across both younger and older drivers, but less important for drivers who drive less frequently and not important for male drivers.

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